

SIXPENCE

JUNE 1944

AMATEUR RADIO

THE
OFFICIAL ORGAN
OF THE
WIRELESS INSTITUTE
OF
AUSTRALIA



Published by the Victorian Division

AMATEUR-RADIO

INCORPORATING THE N.S.W. DIVISIONAL BULLETIN

Vol. 12 No. 6.

June, 1944

A TRIBUTE TO AMATEUR RADIO

There have been rumors to the effect that the radio Amateurs were going to be denied their old frequency bands, and given new bands of such high frequency as to be useless for medium and long distance communication.

Some rumors say "Remember the last War? We are going to get the same treatment this time!"

Now we don't believe the "Hams" should be denied their rightful place on the air in bands suitable for communication beyond the horizon - and further, we do not believe that our Government would want to see those privileges denied.

Are not the "Hams" fighting on many battlefronts, working in war factories and laboratories for a New World wherein the individual will be able to live and enjoy his hobbies, his church and other personal freedoms which go to make up a healthy, happy world?

It is well-known among Government officials whose task it was to build our great war-time communications system that from the rank and file of amateurs came executives, instructors and thousands of engineers and operators. Without this nucleus of experienced men, it would no doubt have taken a much longer time to reach the present high degree of perfection in the communications branch of our fighting forces.

In every emergency Amateurs have proved their ability and willingness to come to the aid of their Country - who would be so unjust as to want to deny them their small place in the radio spectrum? We do not believe these rumors that the "Ham" will be denied his privileges, we believe rather that those who speak so much of justice coming out of this war will see to it that the Amateur receives his just reward.

The entire radio industry knows well, and appreciates the many contributions "Hams" have made for the advancement of high-frequency radio communications, and surely they too can be counted on to assist the "Ham" in regaining his privileges when the right time comes.

So reads the HAMMARLUND MANUFACTURING CO. INC. ADVERTISEMENT in the March issue of "Electronics."

VOLUME EXPANSION

In recent years considerable attention has been given to volume expansion as a means of improving the realism of tone of both broadcast music and the music from direct reproduction of records through amplifiers. There has been much argument for and against volume expansion, particularly in regard to the degree of expansion to be employed, but on the whole, the general consensus of opinion seems to favour at least some degree of expansion.

In view of this interest in volume expansion it has been decided to briefly review some of the methods which have been employed including several which have only recently been suggested in the technical press.

One of the earlier and also one of the simplest methods of obtaining expansion was by utilising the fact that the resistance of a metal filament lamp increases with increase of temperature. They have been used both in simple and in bridge circuits. Information on a simple arrangement of this nature was published in an article by S. W. Amor. Experiments were made with an ordinary 2.5 volt torch globe to see how the resistance of the globe varied as the filament became hotter. The following readings were obtained:-

Volts. Across Bulb	Amps through bulb	Resistance in ohms
0.10	0.10	1.00
1.00	0.20	5.00
2.00	0.27	7.41
3.00	0.33	9.00

It can be seen that as the filament heats up there is a considerable variation in resistance. If such a bulb is connected in parallel with the voicecoil of a speaker and if the impedance of the voice coil is taken at say, 5 ohms, operation of the unit would be as follows.

Suppose a current of 0.1 amps is passing through the bulb then from the above table, it can be seen that the voltage across it will be 0.1 volts i.e. the bulb is absorbing 0.01 watts. Voltage across the voice coil is also 0.1 volts, therefore the current through the coil will be 0.02 amps, i.e. the energy dissipated in the coil is 0.002 watts. The following table gives the results obtained with different voltages across the coil and bulb.

Amps through bulb	Volts Across Bulb.	Volts Dissipated In Bulb	Speaker Current (amps)	Speaker Energy (watts)	Total Energy (Watts)
0.10	0.10	0.01	0.02	0.002	0.012
0.20	1.00	0.20	0.20	0.20	0.40

0.27	2.00	0.54	0.40	0.80	1.34
0.33	3.00	1.00	0.60	1.80	2.80

It can be seen that as the energy supplied to the unit by the speaker transformer increases from 0.012 to 2.80 watts, the energy which the voice coil receives changes from 0.002 to 1.8 watts. This means that the contract between loud and soft passages has been increased by nearly four times.

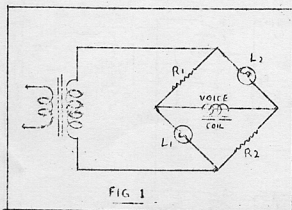
We have assumed that the impedance of the voice coil is constant whereas its impedance actually varies according to the formula -

$$\text{Impedance} = \sqrt{R^2 + L^2 w^2}$$

where R = resistance of coil, L = inductance and w = angular velocity of AC (= $2\pi f$, f being the frequency). It can be seen that as the frequency rises, so does the impedance. This means that at high frequencies the bulb will not perform as well as at low frequencies. Fortunately, however, the inductance of the average moving coil is low so that the increase of impedance is not serious enough to prejudice unduly the performance of the bulb as an expander.

In operation the bulb should light brilliantly on the loud passages and should not light at all on soft ones. This arrangement does not give such good results as other more elaborate ones but is worth trying when one considers the negligible cost and trouble of installation.

Another volume expansion circuit using the same principle i.e. the change in resistance in a globe caused by heating of the filament, is shown in Fig. 1.

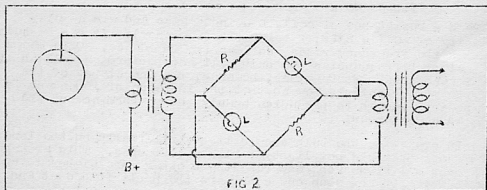


The resistance variations of the two globes are magnified by the bridge arrangement. The resistances R1 and R2 are constant at one ohm. The resistances of L1 and L2 vary with the audio currents passing through them and the stronger the audio signal, the higher the resistance of the globes, and the more the bridge is unbalanced, placing more of the available signal across the voice coil winding.

Due to the thermal inertia of the filaments no measurable amplitude distortion is caused by this method. If the change in

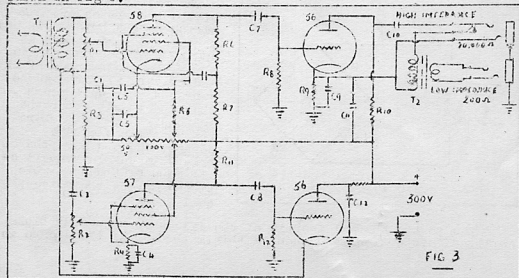
resistance could occur several times a second, appreciable distortion would be produced, but as the thermal inertia damps out any changes over about 20 cycles per second, only the syllabic changes in audio amplitude affect the expander.

A variation of this bridge circuit is to use it between the driver and output stages of an amplifier. Matching transformers are required at each side of the bridge; speaker transformers could probably be satisfactorily used at these points. The circuit is shown in Fig. 2 --



The value of R should be slightly less than the resistance of the globes L when cold.

One of the first expander circuits using valves was that shown in Fig 3.

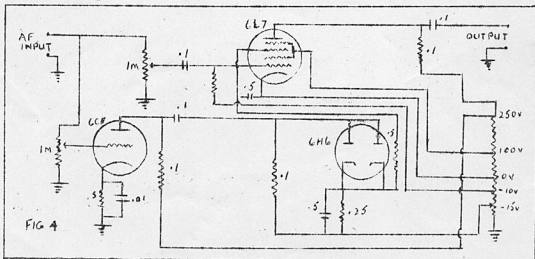


T1 .. Input Transformer	R13 .. 100,000 ohms 1 watt
T2 .. Output transformer (to suit following amplifier)	R14 .. 50,000 ohm (50 watt wire wound)
R1,R2...0.25 meg potentiometer	C1 .. 50 mfd
R3 .. 100,000 ohms 1 watt	C2,C4.. 0.1 mfd
R4 .. 5000 " "	C3,C9.. 10 mfd
R5,R6...250,000 ohms 1 watt	C5,6,7,10,11...0.5 mfd
R7100,000 " "	C8 0.005 mfd
R8 ... 500,000 " "	C12 ... 4 mfd
R9 ... 3,000 " "	
R10 ... 25,000 " 10 watt	
R11 ... 250,000 " 1 "	
R12 ... 500,000 " 1 "	

The signal input is split between the type 58 and the 57. The bleeder resistance is adjusted to give a static bias of 50 volts on the 58 and a screen voltage on this tube of 100 with respect to the cathode.

When a signal is applied to the grid of the control type 56 tube, the tube sees increased plate current which causes increased voltage drop across R5. This voltage drop is subtracted from the static bias on the 58 tube so that this tube then operates on lowered bias with increased gain. In using this circuit it should be remembered that the type 58 tube has linear characteristics over only a limited range and if distortion is to be avoided, the signal input must be low. Except for this limitation and the fact that the expander is rather cumbersome with its four tubes the circuit was quite satisfactory.

A volume expander using a 6L7 and a 6H6 was described by RCA in one of their application notes early in 1936. The circuit is shown in Fig. 4.



The signal is fed to the grid of both the 6C5 and the 6L7. The output of the 6C5 is fed to a 6H6 and the voltage drop obtained over the load resistor is used as a bias on the third grid of the 6L7, bucking the original bias. The original bias on this grid is enough to bring the amplification of the 6L7 very low. The "buck-ing" bias from the 6H6 reduces the original bias in proportion to the input signal, so that a loud signal causes increased amplifi-cation, i.e. volume expander action is obtained.

It is claimed that signal inputs of up to one volt will not cause distortion, but in practice about 0.1 to 0.2 volts seemed a much safer figure. Provided the input is kept to this figure, good results can be obtained with the expander, but low inputs mean higher overall gain in the amplifier is necessary with consequent need for extra care in guarding against hum, particularly in the first stages of the amplifier.

One objection which has been raised against volume expansion is the fact that loud passages always seem to overload the amplifier with rather distressing results. This can and should be obviated, of course, by having ample reserves of power in the final stage. G. E. Otis, however, in an article published in August 1943, set about the problem of expansion by looking at it from the other direction. He stated that the function of a volume expander could be stated, in what he termed a negative sense, by saying that the gain of an amplifier is made to decrease as the input signal voltage decreases .. i.e. the signal always comes down from a prearranged maximum, thus avoiding overloading the final stage.

Referring to the circuit in Fig. 4, the gain of the 6L7 stage is:-

$$M = \mu \cdot k \dots\dots\dots(1)$$

where k represents the circuit constants and μ is a direct function of the input voltage.

Suppose we assume an ordinary voltage amplifier stage as shown in Fig 5. Here the output voltage E will be -

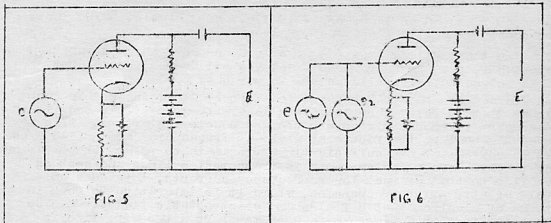
$$E = \mu \cdot e \cdot c \dots\dots\dots(2)$$

where c equals the circuit constants and e is the input voltage.

Suppose that another signal voltage e_2 of the same frequency and in phase with e were applied together with and simultaneously to the grid of the tube together with the original signal as shown in Fig 6. The output voltage E will now be:-

$$E = \mu (e + e_2) \cdot c \dots\dots\dots(3)$$

If e_2 were a voltage smaller than e and of the same frequency but 180 degrees out of phase with e, equation 3 would be then written.



$$E = \mu (e - e_2) \cdot c \dots \dots \dots (4)$$

The gain of the stage will now equal: -

$$M = \frac{\mu (e - e_2) \cdot c}{e} \dots \dots \dots (5)$$

Or if we let e_3 equal the effective input voltage, $(e - e_2)$ then:-

$$M = \frac{e_3}{e} \dots \dots \dots (6)$$

Should e_2 be made to vary inversely with e , then as e increases in amplitude, e_3 will approach a maximum value of e , since e_2 will approach zero. Also as e decreases, e_3 will approach a minimum value of zero, since e_2 will increase and approach e in value. Under these conditions the negative definition of volume expansion is satisfied and the gain of the stage becomes a direct function of e .

This article will be continued next month.

.....00000.....

MEASURING CLOUD LIMITS

A photo-electric cell is incorporated in the latest type of meteorological balloon designed by a United States Government research worker. It is used to indicate the lower and upper limits of cloud through which the balloon rises. The variation in light intensity as the balloon rises into and emerges from a cloud cause the cell to vary the transmitter frequency, the changes in which are recorded by a ground station.

.....

DON'T FORGET THAT THE ESSAY COMPETITION "POST WAR AMATEUR RADIO" CLOSES ON THE 30th OF JUNE ... ENTRIES TO BE SENT TO THE FEDERAL SECRETARY, 21 TUNSTALL AVENUE, KINGSFORD, N.S.W.

THE TECHNICAL LIBRARY

HYPHER AND ULTRA HIGH FREQUENCY ENGINEERING

Sarbacher and Edison (New York - 1943) .. 644 pages .. 52/3. Copy by courtesy McGills Newsagency, Melbourne.

In these enlightened (?) days more and more is being written about UHF, some good and some - well, shall we say, not so hot. This volume happily falls in the former category.

The authors have taken pains to approach their subject in such a way that to fully understand the later stages of their book it is necessary to thoroughly absorb the introductory chapters. This is brought about by the fact that while at frequencies around 1-5 M/cs it is convenient and sufficiently approximate to regard the behaviour of the high frequency currents in transmission lines and such as similar to that of much lower frequency currents, this does not hold at Ultra-High Frequencies, where it is imperative to work in terms of electromagnetic fields and electrostatic fields. A case in point is that a single wire used to short a two wire line is reasonably effective at low radio frequencies, as the frequency is raised it becomes less effective, until at UHF it is almost useless and a plate is necessary. The explanation is simple; although the shorting wire carries the actual current it cuts only a very small part of the two fields and these continuing on can easily excite the remaining portion of line and upset the whole affair. The plate to a certain extent overcomes this.

Introductory chapters cover fundamentals of field theory Maxwells Equations and Reflection and Refraction of Plane Waves. Various types of Wave Guides, Transmission Lines, Cavity Resonators Horns and Reflectors are then discussed most fully. The remainder of the book covers behaviour of vacuum tubes at high frequencies also Amplifiers and the various kinds of Oscillators in use at these frequencies including the latest type of all, the Klystron. Appendices are headed Fundamental Constants and Conversion table of units (conversion from electrical units to units used in Field theory).

Although much of the subject matter is fairly mathematical (differential equations, double definite integrals, Taylor's Theorem Bessel Functions etc) there is also much of immediate practical value, to be obtained from the chapters on Wave Guides, the maths being used mainly to lead up to this subject, and the actual determinations of working dimensions and critical frequencies being quite simple.

I notice that books reviewed in this page have been advertised at prices slightly differing from those quoted here, which are usually the prices marked in the copies loaned to us for review. While we strive for accuracy in this matter it is always possible for errors to occur and we ask readers to regard these figures as a close indication only.

Alec H. Clyne - Review Editor.

SLOUCH HATS and FORAGE CAPS.

Having survered the fast diminishing heap of coke and sorrowfully filled up a scoop full, I've got the cosy stove going and now to the notes...if they end suddenly you will know all the coke and heat have departed...and the Yf says "even for Slouch Hats and Forage Caps" not another bit. Oh yes, the Yf's away...but she left two "cockatoos" behind in the shape of Jimmy Jnr. and his brother, Hi! Just a tip, you married chaps...ALWAYS send "all" the Jaxs. away with the Yf or, otherwise you have to wash up and make the beds, every day, which, as you all know, is an unnecessary feminine invention, waste of manpower too, in war time. Hi!

Had a few visitors during the month which is very appreciated event here at 2YCs. First Con Bischoff...W/O of course, to you; he dropped in. Con does his DX these days from one of those Townsville numbers and is well pleased with the job he is on. Anything that involves finding the "bugs" is right into the old 2LZ barrow.

The next visitor was a Corporal in the RAF gray looking for those very rare and almost extinct things called Films. A shot at random revealed he "did have a transmitter before the war" and so I met one GGMU, a Radio Mechanic attached to the Spitfire Squadron at Darwin. He had been spending his leave with a cousin a few doors from the shop. But alas, the leave ended and I saw no more of him, but I will find his unit details for you hams up that way.

Then there was a very pleasant surprise to meet GRP's successor as our Canberra Correspondent...one by the name of Smith, whom most of you know as 3RY. It is much nicer and easier to deal with chaps one has met than otherwise...so, when passing through VIS drop in at 2YCs.

3RY mentions that the ham family at Canberra is fast losing its members as operations go farther North. At the moment, 2RC, 2ACG and himself are the only ones left up there.

VK5FA is on the way to VK6 and the YF is to join him there as soon as transport can be arranged.

2ANP is now up at Darwin, and still sighs for all the delights of our Federal Capital City, but alas even leave is a year or more in the dim and distant future, sez Jack.

'Tis said that when one 2RC, Bob Chilton, sometime, instructor used to walk into a class, his first request was "Any Hams here? Stand up and give your calls," which is one way of meeting ones QSO's.

Oh, by the way...Sid Clark says thanks ever so much for all the needles everybody sent. He reckons if our circulation is to be judged by the numbers of needles he received...QST isn't in it, hi!

A letter from Bob Stevens 30J reports the irregular arrival of Amateur Radio (now, steady Ed...its due to the Army P.O. he says...) (and sure 'tis his brother 3JO who's responsible for posting all magazines ... Ed.)

One of his main grouses. About their transmitter he has the following secret to divulge "We find our 2RC rig gives very little trouble and does a good job, besides being useful as a "rat trap" (the patent is already taken out...2YC--). One night on one of the rare occasions the set was closed down for servicing, a rat found its way inside, and chose, for its quarters, a spot directly beneath the high voltage

filter condensers. Well, the first we knew of it was a nice ripe smell that at first defied all efforts at location, till at last we got a whiff that left no doubt that it came from within. A brief search was followed by a burial, but the set still gives off a faint odor of distinct rodent, hi! That supper is sure on, too, om.

Yet another ham has been unable to hold out under the continued high pressure salesmanship (ahem!) of our column, and the following news comes to hand from one of the lads. Fl/Lt Pat Boyd (VK3PB to you hams) recently figured in the news for flying home from a raid on Timor on one engine. Pat served about two and a half years in England as a nightfighter pilot, mostly in Beaufighters. Thanks to him, two 88s (oh no, not in this case...love and kisses...its D. Code) did not get home from a night raid. Returning home early in '44, he had some leave but in almost too short a space of time was sent "up north" from whence comes news of this difficult exploit.

Sgt. Chas. Nelson 3WC reports meeting Squadron Leader Walz 4AW..ye gods, Arthur, om. However, congrats...we can still stand a Sqd/ldr at 2WCs and I'm waiting for you to help me dig out that shelter you "helped" put in, hi!

3NY says he had a visit from W6AZC formerly W7HKT Pte Edward E. Squier. He had 15 days leave from a Northern location and is very anxious to meet some of the hams he has worked since 1928. His army address if you have his 48L..is..20937186 ASN Pte. Edward E. Squier, 849 Sig. Detachment APO 928 Unit 2 U.S. Army.

A VK3 on leave from the North is 3CT; Lac Ray Graf. He has met in the course of his travels Roy Streeter 3RC, Adrian Miller 3AH, both very well known to you all. Also Sqd. Ldr. W. Weston 6MW, Fl/Lt F.A. Hull 6PH, G.S. Bemrose 6NP, T. Ham 4WX and a VK5...quite a representative lot of VK Ham Radio, what!

Fred Luback 4RF is now located at Townsville, which is a very nice spot for A.R. to have an "official correspondent." By the way the poor optimist he wants to buy a couple (mark you) of 2 or 3 gang H type tuning condensers...wouldn't it???? He is "trying" to build a six tube super for after the War..by the time he gets the parts it will be "after".

Our Townsville Correspondent sends the following - "Leo Wiers VK2KS an old timer and ex DX hound is keeping the sets "ticking" up here between building himself a receiver or two. Leo spent about 3 years over the other side recently and visited lots of DX.

Cliff Couchman VK4KZ another old timer, but not very active in the good old days" is also keeping His Majesty by handling traffic and assisting win the War.

VK4SR Tom Shoring of low power fame in Nth. Queensland is happily engaged helping the other two. Tom has just built himself another very nice bug.

And so, once more YOUR pages just managed to reach their quota, but you can take it from me that the hook IS empty. All Ham radio is just what we all, individually, make it, but this column is particularly so. Chaps in forward areas look forward to reading where you all are, so spare a moment and drop a line to your Divisional Secretary, or if passing through Sydney, ring MUL92 or better still, come out and see VIC2XC...78 Maloney Street, Eastlakes, Mascot. N.S.W.

DIVISIONAL NOTES

FEDERAL HEADQUARTERS

At the last meeting of the Federal Executive the question of the W.I.A. Prisoners of War Fund was discussed at some length. At the present time there is the sum of £33.3.0 standing to the credit of this fund. Although it is known that quite a number of amateurs are P.O.W's, unfortunately the addresses of only two were known and both of these were in Italy. With the everchanging tide of events in the land of the "I's" all trace of these chaps has been lost for the time being. The last we heard of 3NR - through courtesy of G8YL - was that he was in Poland, whilst nothing has been heard of the whereabouts of 2AKE.

Therefore it was decided that if we could not help these chaps personally it was better to help them indirectly, and the only way to do that was by making a donation to the Red Cross P.O.W. Fund. It was unanimously decided that a further donation of Five Guineas be made to that organisation immediately.

Recently, as a result of a motion from P.B.W, P.H.C. approached the active States with the object of obtaining their views on the issue of Post War A.O.C.P's to Servicemen and Women. VK2 were of the opinion that provided that a service applicant could produce evidence - supported by his commanding officer - that his knowledge was equal to or greater than that required by the syllabus for the A.O.C.P., these applicants should not be compelled to sit for an examination. As the States are in favor of this matter, the Department will be approached. Incidentally, this privilege has been granted the R.S.G.B. by the English authorities.

Just to remind members that the Essay Competition on Post War Amateur Radio will close on 30th June. Remember, three prizes may be won, depending upon the number and quality of essays submitted. Frankly the Executive are rather disappointed with the number of entries received from VK3. This goes for both rank and file. Nevertheless, there is still time to retrieve the position "South of the Border." Surely you fellows must have some ideas regarding the post war magazine at least.

.....

NEW SOUTH WALES DIVISION.

At the May General Meeting of the VK2 Division the Chairman in declaring the Meeting open, extended a welcome to quite a number of interstate visitors including P/O Tel Ray Smith VK3RX, W/O Len Payne VK4LP and Ft. Sgt. Jack Gabbertass VK6GB.

Formal business was soon dispensed with and the evening given over to the visitors who regaled us with short talks of their experiences since leaving their home States. A striking tribute

was paid to the value and adaptability of the Ham in the Services by JEE. Ray told us of a job he has given in the early days of the "Post War Pearl Harbor War." The assignment was a particularly difficult one. Location, parts untrodden by white men, the need for communication, urgent, the detachment, practically untrained. Ray reckoned that if he hadn't been born snowheaded he would have been then. Fortunes of war. A ham was a found among the detail. Ray's burden very considerably lightened.

Len Payne seemed to be following Jack Howes and Bob Chilton around a lot. Was astounded to learn that Bob was a ham. Jack Gabbertass was very pleased to be able to talk ham stuff again. Now that last sentence brings us to something.

We have been in receipt of the T. & R. Bulletin published by the Radio Society of Great Britain prior to and since the outbreak of War. One thing that has always struck us about Amateurs in the Services in England, particularly those attached to R.A.F. stations, is the fact that "mirror" hamfests have been held on different occasions. We have yet to hear of anything like this taking place on any of the R.A.A.F. stations. Apparently in England, a good time is had by all on these occasions and many a lie - pardon - tale is told about Dx in the good old days. The R.S.G.B. is usually represented. Surely something like this could be arranged in Sydney or Melbourne. What about it chaps?

Thursday 15th June will be competition night. Remember, you are to have your entries in by 6 p.m. and judging will commence at 7 p.m. The exhibition will be held in the Cafeteria and not Room "K" as previously announced. Three excellent prizes are to be competed for. Advance information as to the number of entries you intend making will be appreciated.

EMERGENCY COMMUNICATION NETWORK.

At the May Meeting of the Division the N.E.S. Cup was on view, and it is certainly a very fine Trophy. We noticed Gordon Cole 2DI, Section Leader from Concord looking at it from several angles. Wonder what the reason was. "Wishful thinking" or "Thoughtful wishing."

The Network is rapidly settling into its new routine with the District Ambulance Controls and at the time of writing four practices have been held and messages handled as follows:-

First week-end	56	messages in	83	minutes
Second " "	66	" "	86	" "
Third " "	46	" "	90	" "
Fourth " "	62	" "	90	" "

With reference to the last week-end, 32 messages were handled in 32 minutes at one stage. Good going, what!

So far very little progress had been made with the Sydney Harbor Patrol section of the Net. The allocation of a frequency and the installation of A.C. at Maritime Control have been the main drawbacks. Once these are overcome, it won't be long and the North Sydney gang will be in action again.

Tuesday 6th June should see the commencement of the Competition for the N.E.S. Cup. Pity the poor judges. The efficient manner in which each station is operating will make the task very difficult.

"

" DOES RIPLYN KNOW THIS?"

Some few months ago a well-known VK2 amateur, to wit, Wal Ryan VK2TI was driving from his home into the City and happened to notice an American sailor a couple of hundred yards ahead of him. As he was about to pass him, the Yank gave a half-hearted "hitch-hike" sign. 2TI pulled up and found that the sailor boy was headed in the same direction and offered him a lift, which was gratefully accepted.

Glancing down at the lad's arm Wal noticed that he was wearing the insignia of a Radio man and the following conversation took place.

"Say, old man, you don't happen to be a Ham, do you?"

"Eh, what?"

As this question didn't seem to register 2TI came to the conclusion that the Yank was "just another operator" but nevertheless repeated the question in a louder voice.

"Say old man, are you a Ham?" Immediately our friend came to life with " Sure I am." Then of course the next question -

"What's your call?" "My call is WOPWJ." What's yours? Why I'm VK2TI."

The foregoing was enough to cause any two hams quite a bit of jubilation, but listen to this.

"Did you say your call was VK2TI?" after answering in the affirmative our American friend replied, "Well you must be Wal Ryan". Again acknowledging, Lee went on as follows. "Do you know a red-headed sailor up in Port Moresby?" Of course this was a pretty tall order, but giving the matter some consideration, I enquired whether the copper top was Syd Clark, commonly known as the "Red Terror of Flinders." Lee said yes. Now listen to this!

" Well Wal, I've just come down from New Guinea and the last chap I saw was Syd, and his last words to me before leaving, was that if I went to Sydney to be sure and look up Wal Ryan, VK2TI!

It was just too bad that it was after 6 p.m. and all the local hostelrys were closed, but nevertheless we drank each other's health and Syd's health too, in milk.

VICTORIAN DIVISION

Victorian metropolitan Hams should receive this magazine on Tuesday June 6th. They are reminded that at the meeting on that night, it is hoped that Mr. F. T. Stagg will be able to attend. As mentioned in last month's issue, that if Mr. Stagg is able to get along he intends to give a talk on his experiences in running a broadcast station in the Middle East. He also has some photographs which should prove interesting.

The Membership drive being conducted by this Division has up to date been very successful. The help and co-operation from the country members has been the result of many new members being enrolled. Perhaps the metropolitan members could copy the good work of those country members, which would surely result in a further large increase in membership.

Once again Victorian Divisional Hams are reminded of the Essay Competition being conducted by Federal Headquarters. As the entries close on the 30th of June, no time should be wasted in forwarding contributions. The subject "Post War Amateur Radio" should give a very wide scope for Hams to air their views. To reprint the original, or part of the original notification about this competition we quote as follows:- "What are your views on this all important subject? Do you think that Amateurs should be granted the same privileges as in pre-war days? Do you think they should be restricted to operating on the higher frequencies? - Should power be limited to 50 watts or a kilowatt or is there a happy medium. Do you think the Institute should have a permanent staff .. Do you think all Amateurs should belong to the W.I.A.? What are your ideas of the post war Amateur Station? - Do you think that Service and Civilian Defence Reserves should be organised and maintained by means of a Government subsidy? - Do you think that the RAG should vest in the W.I.A. the control of Experimental Radio to a larger degree than they did in the past.

For the best three Essays One Pound War Savings Certificates will be given. The closing date is the 30th of June and all entries should be addressed to the Federal Secretary, W.I.A. 21 Runstall Avenue, Kingsford, N.S.W. and should be endorsed, "Essay Competition."

Council wishes to advise members that there are a few copies of the "ADMIRALTY HANDBOOK" still available. The cost is £1, post free. The proceeds from the sales are to be re-invested in additions to the Technical Library.

A member after reading the book reviewed in this issue, suggests that "a perusal of such a book as this seems to suggest that in the not far distant future a certain eminent member of the VAS Division will be altering the sign over his business premises to read "Sanitary and U.H.F. Plumber"

.....000.....

THE WIRELESS INSTITUTE OF AUSTRALIA



Divisions of the Wireless Institute of Australia exist in every State of the Commonwealth. The activities of these Divisions are co-ordinated by Federal Headquarters Division, the location of which is determined from time to time by ballot.

Present location of F.H.Q. :— New South Wales

Federal President : F. P. DICKSON, VK2AFB.

Vice-President : H. F. PETERSON, VK2HP. **Federal Secretary :** W. G. RYAN, VK2TI.

Councillors : C. FRYAR, VK2NP ; W. J. McELREA, VK2UV

Official Organ : "AMATEUR RADIO"—Published by the Victorian Division.

VICTORIAN DIVISION

191 QUEEN ST., MELBOURNE

Postal Address : Box 2611W, G.P.O.

President : H. N. STEVENS, VK3JO

Secretary : R. A. C. ANDERSON, VK3WY

Treasurer : J. G. MARSLAND, VK3NY

Councillors : I. MORGAN, VK3DH; T. D. HOGAN, VK3HX; R. J. MARRIOTT, VK3SI; C. QUIN, VK3WQ; A. H. CLYNE, VK3VX; H. BURDEKIN; K. RIDGWAY.

Subscription Rates

Metropolitan	£1 per annum
Country	14/6 per annum
Defence Forces	7/6 per annum

Subscription includes "AMATEUR RADIO"

Meeting Night

**First Tuesday in each month at W.I.A. Rooms,
191 Queen Street.**

Visiting Overseas and Interstate Amateurs are welcome at meetings and they are invited to communicate with the Membership Secretaries :

T. D. HOGAN .. VK3HX - UM1732

J. G. MARSLAND VK3NY - WF3958

NEW SOUTH WALES DIVISION

Registered Office :

21 TUNSTALL AV., KINGSFORD

Telephone : FX3305

Postal Address : Box 1734JJ, G.P.O., Sydney

Meeting Place

Y.M.C.A. BUILDINGS, PITT ST., SYDNEY

President : R. A. PRIDDLE, VK2RA

Vice-Presidents : H. F. PETERSON, VK2HP ;
E. HODGKINS, VK2EH.

Secretary : W. G. RYAN, VK2TI

Treasurer : W. J. McELREA, VK2UV.

Councillors : N. GOUGH, VK2NG; E. TREHARNE,
VK2AFQ; P. DICKSON, VK2AFB; C. FRYAR, VK2NP;
R. MILLER

Subscription Rates

Full Members	10/6 per annum
Service Members	7/6 per annum

The N.S.W. Division meets on the third Thursday of each month at Y.M.C.A. Buildings, Pitt St., Sydney and on invitation is accorded to all Amateurs to attend. Overseas and Interstate Amateurs who are unable to attend are asked to phone the Secretary at FX3305.

WESTERN AUST. DIVISION

C.M.L. Buildings,

ST. GEORGE'S TERRACE, PERTH

Postal Address : BOX N1002, G.P.O. PERTH.

Secretary : C. QUIN, VK6CX.

QUEENSLAND DIVISION

Box 1524V, BRISBANE

SOUTH AUSTRALIAN DIVISION

Box 284D, ADELAIDE

TASMANIAN DIVISION

BOX 547E, HOBART